

#### ABSTRACT OF THE DISCLOSURE

A method for providing environmental monitoring and control includes providing a network of wireless nodes, the wireless nodes includes an array of sensor nodes and an array of actuator nodes, each wireless node including a wireless transceiver, a processor and one of a sensor device or an actuator device. The method further includes sending a message from a first wireless node to a second wireless node through wireless communication; and processing the message at the second wireless node. In operation, the message may include sensor data or a control command operative to control the sensor device or the actuator device in the second wireless node. In one embodiment, a sensor node processes sensor data and generate a control command as a message to be transmitted to an actuator node. In another embodiment, the actuator node transmits a message to a sensor node to request sensor data or control commands.